

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of cleaning a substrate processing substrate processing apparatus, comprising the steps of:

after processing a substrate placed in an inner chamber of [[a]] the substrate processing apparatus, elevating a temperature of the inner chamber higher than that maintained while [[when]] processing thereof the substrate;
exhausting a space between the inner chamber and an outer chamber that accommodates the inner chamber to maintain a pressure of the space to be lower than that outside the outer chamber;
supplying a cleaning gas into the inner chamber; and
removing substances to be cleaned off which are adhered to an inside of the inner chamber, while cooling the outer chamber.

Claim 2 (Canceled).

Claim 3 (Original): The cleaning method of claim 1, wherein the outer chamber is made of metals.

Claim 4 (Original): The cleaning method of claim 1, wherein the cleaning gas is spread along a surface of a substrate-supporting member which supports the substrate accommodated into the inner chamber.

Claim 5 (Original): The cleaning method of claim 1, wherein the cleaning gas includes ketone.

Claim 6 (Original): The cleaning method of claim 5, wherein the ketone is β -diketone.

Claim 7 (Original): The cleaning method of claim 6, wherein β -diketone is hexafluoroacetylacetone.

Claim 8 (Original): The cleaning method of claim 1, wherein the temperature of the inner chamber is higher than that of the inner chamber when processing a substrate by more than or equal to 100°C.

Claim 9 (Original): The cleaning method of claim 1, wherein the inner chamber is made of quartz or ceramics.

Claim 10 (Original): The cleaning method of claim 1, wherein the substances to be cleaned off are oxides containing at least one element selected from the group consisting of Al, Y, Zr, Hf, La, Ce and Pr.

Claim 11 (Original): The cleaning method of claim 1, wherein the cleaning gas includes an active species.

Claim 12 (Original): The cleaning method of claim 1, wherein the cleaning method is performed while exhausting an inside of the inner chamber.

Claim 13 (Original): The cleaning method of claim 12, wherein the exhausting of the inside of the inner chamber is performed by using a different exhausting system from the exhausting system which is used for processing the substrate.

Claim 14 (Original): The cleaning method of claim 12, wherein the exhausting of the inside of the inner chamber is performed while collecting a by-product which is generated from a chemical reaction between the substances to be cleaned-off and the cleaning gas.

Claim 15 (Original): The cleaning method of claim 14, wherein the collecting of the by-product is performed at a position close to the inner chamber.

Claim 16 (Original): The cleaning method of claim 1, wherein the inner chamber is heated by a resistance heating element.

Claim 17 (Original): The cleaning method of claim 1, wherein the inner chamber is heated by a heating lamp.

Claims 18-48 (Canceled).

Claim 49 (Currently Amended): A ~~substrate-processing~~ substrate processing apparatus, comprising:

an inner chamber;
an outer chamber accommodating the inner chamber;
a cleaning gas supplying unit for providing a cleaning gas to an inside of the inner chamber;

a chamber heater for heating the inner chamber, the chamber heater being installed between the inner chamber and the outer chamber; and
an exhaust unit for exhausting a space between the inner chamber and the outer chamber to maintain a pressure of the space to be lower than that outside the outer chamber.

Claim 50 (Canceled).

Claim 51 (Original): The substrate-processing apparatus of claim 49, further comprising a reflecting body which guides a heat ray into the inner chamber, the heat ray being irradiated from the chamber heater.

Claim 52 (Canceled).

Claim 53 (Currently Amended): The substrate processing A substrate processing apparatus of claim 49, comprising:

an inner chamber;
an outer chamber made of metals and accommodating the inner chamber;
a cleaning gas supplying unit for providing a cleaning gas to an inside of the inner chamber;
a chamber heater for heating the inner chamber; and
an exhaust unit for exhausting a space between the inner chamber and the outer chamber
wherein the outer chamber is made of metals.

Claim 54 (Currently Amended): The substrate processing A substrate processing apparatus of claim 49, further comprising:

an inner chamber;

an outer chamber accommodating the inner chamber;

a cleaning gas supplying unit for providing a cleaning gas to an inside of the inner chamber;

a chamber heater for heating the inner chamber;

an exhaust unit for exhausting a space between the inner chamber and the outer chamber; and

a cooling unit for cooling the outer chamber, the cooling unit being installed to the outer chamber.

Claim 55 (New): The method of Claim 1, wherein the exhausting of the space between the inner chamber and outer chamber begins before elevating the temperature of the inner chamber higher than that maintained while processing the substrate.

Claim 56 (New): The method of Claim 55, further comprising heating the inner chamber while cooling the outer chamber.